GUIDELINES FOR THE LOCATION AND DESIGN OF HAZARDOUS SPILL BASINS

Hazardous Spill Basins are provided in new highway construction and major improvment projects at strategic locations along arterial system highways to aid in containment and clean up of accidental spills. The determination of these strategic locations is based on concentrated truck usage areas such as; parking sites at rest areas, weight stations, and runaway ramps, as well as for highway segments in close proximity to particularly sensitive waters such as; outstanding resource waters and water supply sources.

The strategy is to configure the highway segment of concern such that any potential spill runoff would be directed through a facility (basin) where the flow could be interrupted and temporarily stored to prevent hazardous material from reaching a receiving stream.

The use of these basins and other management practices to protect receiving waters is in accordance to the general policies and criteria presented in the departments document "Best Management Practices for Protection of Surface Waters". The following is additional specific guidance in the location and design of the basins:

APPLICABLE LOCATIONS

- Basins will be provided **at stream crossings** on highways functionally classified as a rural or urban arterials and,
    - The stream(1) is identified as an Outstanding Resource Water (ORW) or a WS-I watersupply, or
    - The stream(1) crossing is within 1/2 mile of the critical area(2) of a water supply source classified as WS-II, WS-III and WS-IV.
- Provision of basins at crossings of those streams on highways functionally calssified as collectors and local streets and roads can be evaluated on a site by site basis with consideration for: traffic volume, traffic type, accident potential related to the highway geometrics, receiving water quality, and the feasibility of basin construction at the site.

(1) *For the purpose of these guidelines "stream" will be defined as those depicted as blue lines on 7-1/2 minute (1:24000 scale) United States Geological Survey (USGS) quadrangles.*

(2) *Critical area is defined as extending 1/2 mile from the normal pool elevation of a reservoir; or 1/2 mile upstream of , and draining to an intake. This would make the effective area for hazardous spill basins placement, within 1.0 mile of the normal pool or upstream of an intake.*

DESIGN REQUIREMENTS

- The volume of spill containment storage provided will be approximately 10,000 gallons plus the estimated runoff volume from a rainfall intensity equating to a two year return period event.

- A means will be provided such that the normal free flow of runoff at the basin outlet can be interrupted to cause containment of hazardous runoff. This can be accomplished by providing a mechanical control gate or by constructing a minimum control section in the outlet channel that could be readily blocked by such simple mean as shoveled earth material or stacked bags.

- The mechanical gate alternative will generally be utilized in areas where normal operational activities would allow close scrutiny and control, reducing the potential for problems with vandalism. Examples would be rest areas, weight stations and within controlled access.